IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended)A ~~cell~~ packet transfer control method on ~~an asynchronous transfer mode network~~ a packet switching device, said method~~,~~ comprising the steps of:

~~when setting up a connection belonging to a particular traffic class which does not make bandwidth reservation,~~ sending a packet including a traffic class indicative of a packet transfer ~~storing information indicative of a~~ priority and information indicative of a priority related to ~~cell~~packet discarding ~~discard declared from a source unit in any of nodes in said network corresponding to an identifier of said connection~~; ~~and~~

storing said information indicative of a priority related to packet discarding; and

~~when congestion occurs on the connection,~~ performing ~~instructing said node to perform~~ selective discard processing on ~~cells~~packets belonging to said particular traffic class in conformity with~~to~~ a predetermined discard condition determined by ~~a relationship between the status of said congestion and~~ said priority based on said information indicative of a priority related to packet discarding.

Claims 2-4 (canceled).

5. (currently amended)A ~~cell~~packet transfer control method according to claim ~~3~~1, wherein~~:~~ said ~~node~~ packet switching device determines whether or not a data block included in a data portion of each packet of said particular traffic class is divided from the same transmission message as a data portion of a previous packet, and performs the packet discarding on packets having the discard condition in units of transmission message. ~~judges whether nor not a data block included in a data portion of each cell of said particular traffic class is divided from the same transmission message as a data portion of a previous cell, and performs the discard processing on cells falling under the discard condition in units of transmission message.~~

Claim 6 (canceled).

7. (currently amended)A ~~cell~~packet transfer control method according to claim 5, wherein~~:~~ said ~~node~~packet switching device starts the discard processing on ~~cells~~packets having ~~which fall under~~ a predetermined discard condition determined by ~~a relationship between said congestion status and~~ said priority, and continues the discard processing on subsequent ~~cells~~packets including part of the same transmission message as data portions of already discarded ~~cells~~packets~~, even if the subsequent cells deviate from said discard condition due to a change in said congestion status~~.

Claim 8 (canceled).

9. (currently amended)A ~~cell~~packet transfer control method according to claim 5, wherein~~:~~ said ~~node~~ packet switching device excludes ~~cells~~packets including data blocks of the same transmission message as data portions of previously sent ~~cells~~packets from ~~cells~~packets to be discarded, ~~within cells falling under a predetermined discard condition determined from a relationship between said congestion status and said priority,~~ and starts the discard processing from a ~~cell~~packet including a head data block of a subsequent new message.

Claim 10 (canceled).

11. (currently amended)A packet switching device ~~connected to a plurality of input lines and to a plurality of output lines~~ for transferring ~~each fixed length packet (hereinafter referred to as the "cell")~~packets ~~inputted from each input line to any output line determined by cell header information~~, comprising:

means for extracting a traffic class indicative of a packet transfer priority and information indicating a priority related to packet discarding from a packet~~, operative when setting up a connection belonging to a particular traffic class which does not make bandwidth reservation, for storing information indicative of a priority related to cell discard declared from a calling unit as sub-class information corresponding to an identifier of said connection~~;

means for storing said information indicating a priority related to packet discarding; and

~~means for detecting a congestion status on each of said output lines; and~~

means for selectively performing discard processing on a ~~cell~~packet belonging to said particular traffic class in conformity ~~to~~with a predetermined discard condition determined by ~~a relationship between a congestion status on an output line, to which the cell is to be transferred, and~~ said priority based on said information indicating a priority related to packet discarding.

Claims 12-28 (canceled).

29. (currently amended)A packet processing device ~~according to claim 28, wherein:~~for processing a packet, comprising:

means for receiving a user packet including traffic class information and sub-class information indicative of a priority related to packet discard, and storing said traffic class information and said sub-class information from said user packet; and

packet discard control means operative to selectively discard user packets by specifying user packets to be discarded based on a priority related to packet discard indicated by said sub-class information,

wherein user packets are selectively discarded in accordance with said sub-class information to which each user packet belongs, even if the user packets belong to the same traffic class,

wherein each user packet ~~a header portion of each user cell~~ includes a data block and a header portion which includes delimiter information which indicates a correspondence of said user packet to a data unit of a transmission message~~set in a~~

~~data portion subsequent thereto, and delimiter information indicative of a relationship with a data unit treated by a higher rank protocol;~~, and

wherein said ~~cell~~packet discard control means specifies user ~~cells~~packets to be discarded in data units of a transmission message ~~said higher rank protocol~~ based on the delimiter information ~~of~~in each user ~~cell~~packet.